

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended)      A network device having router functionality, comprising:
  - a processor;
  - memory in communication with the processor; and
  - program instructions stored in memory and executable on the processor to:
    - designate a fail-over virtual router interface for a first physical router on a second physical router based on address information of the first physical router obtained via communication between the first physical router and the second physical router; and
    - designate a fail-over virtual router interface for the second physical router on the first physical router based on address information of the second physical router.
2. (Original)    The network device of claim 1, further including program instructions which execute to assign an IP address for the fail-over virtual router interface of the second physical router.
3. (Original)    The network device of claim 1, wherein the network device is a management station.
4. (Original)    The network device of claim 1, wherein the network device is a network switch.

5. (Original) The network device of claim 1, wherein the network device is a network hub.

6. (Original) The network device of claim 1, further including program instructions which execute to communicate an IP address and domain identifier between the first physical router and the second physical router.

7. (Currently Amended) A network management system, comprising:  
a first and a second physical router each having a processor and memory in communication with the processor, wherein:[:;]

~~a second physical router including:~~

~~a processor;~~

~~memory in communication with the processor;~~

the second physical router includes:

means for obtaining address information from the first physical router and communicating the address information to the second physical router; and

means for designating a fail-over virtual router interface on the second physical router based on the address information obtained from the first physical router; and

the first physical router includes:

means for designating a fail-over virtual router interface on the first physical router based on the address information obtained from the second physical router; and

means for designating a fail-over virtual router interface on the first physical router based on the address information obtained from the second physical router.

8. (Currently Amended) The system of claim 7, wherein the means for obtaining the address information includes program instructions which execute in the first physical router to transfer address information to the second physical router.

9. (Currently Amended) The system of claim 7, wherein the means for obtaining the address information includes program instructions which execute in the second physical router to receive the address information from the first physical router.

10. (Currently Amended) The system of claim 7, wherein the means for designating [[a]] the fail-over virtual router interface includes program instructions stored in the memory and executable on the processor.

11. (Currently Amended) A method of setting up router redundancy between a first and a second physical router, comprising:

executing program instructions to communicate, between the first physical router and the second physical router, address information assigned to the first physical router and address information assigned to the second physical router; and

designating a fail-over virtual router interface for the first physical router on the second physical router based on the address information assigned to the first physical router; and

designating a fail-over virtual router interface for the second physical router on the first physical router based on the address information assigned to the second physical router.

12. (Currently Amended) The method of claim 11, further including assigning address information to the fail-over virtual router interface for the first physical router based on the address information assigned to the first physical router.

13. (Currently Amended) The method of claim 12, further including assigning a virtual IP address to the fail-over virtual router interface for the first physical router based on the address information assigned to the first physical router.

14. (Currently Amended) The method of claim 12, further including assigning a mask length to the fail-over virtual router interface for the first physical router based on the address information assigned to the first physical router.

15. (Currently Amended) The method of claim 12, further including assigning a router identifier to the fail-over virtual router interface for the first physical router based on the address information assigned to the first physical router.

16. (Currently Amended) The method of claim 11, wherein the method further includes:

~~assigning address information to the first physical router;~~  
designating a domain of the first physical router; and  
assigning a router identifier to the first physical router;  
~~setting up a virtual router interface on the first physical router;~~  
~~executing program instructions to communicate, between the first physical router and the second physical router, address information assigned to the second physical router; and~~  
~~designating a fail-over virtual router interface for the second physical router on the first physical router based on the address information assigned to the second physical router.~~

17. (Original) The method of claim 16, further including assigning an IP address and a mask length to each physical router.

18. (Currently Amended) A method of setting up router redundancy between a first and a second physical router, comprising:

assigning an IP address to the first physical router and to the second physical router;

designating a domain of the first physical router and of the second physical router; and

auto-configuring address information for a virtual router on the second physical router based on the IP address and domain of the first physical router by executing program instructions to communicate between the first and second physical routers ; and

auto-configuring address information for a virtual router on the first physical router based on the IP address and domain of the second physical router by executing program instructions to communicate between the first and second physical routers.

19. (Currently Amended) The method of claim 18, wherein the method further includes:

~~assigning an IP address to the second physical router;~~

~~designating a domain of the second physical router;~~

assigning a router identifier to the first and second physical router;

setting up a virtual router interface on the first physical router; and

setting up a virtual router interface on the second physical router

~~auto-configuring address information for a virtual router on the first physical router based on the IP address and domain of the second physical router by executing program instructions to communicate between the first and second physical routers.~~

20. (Original) The method of claim 18, further including communicating information between the first physical router and the second physical router to obtain a router identifier assigned to the first physical router.

21. (Original) The method of claim 20, further including designating a router identifier of the second physical router based upon the router identifier obtained from the first physical router.

22. (Currently Amended) A computer readable medium having a program to cause a device to perform a method, comprising:

executing program instructions to communicate, between a first physical router and a second physical router, address information assigned to the first physical router and address information assigned to the second physical router; ~~and~~

designating a fail-over virtual router interface for the first physical router on the second physical router based on the address information assigned to the first physical router; and

designating a fail-over virtual router interface for the second physical router on the first physical router based on the address information assigned to the second physical router.

23. (Currently Amended) The computer readable medium of claim 22, further including assigning a first IP address for a first local area network to ~~[[a]]~~ the first physical router and assigning a second IP address for a second local area network to ~~[[a]]~~ the second physical router.

24. (Original) The computer readable medium of claim 23, further including designating a fail-over virtual router for the first IP address and designating a fail-over virtual router for the second IP address.

25. (Currently Amended) The computer readable medium of claim 22, further including assigning a first IP address for a first local area network and assigning a second IP address for a second local area network to ~~[[a]]~~ the first physical router.

26. (Original) The computer readable medium of claim 22, further including communicating between the first and second physical router using a layer-2 packet.